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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/960,618 | 09/21/2001 | Koichi Otsuki | MES1P047 | 4302 |
| 22434 | 7590 | 04/16/2004 | EXAMINER | |
| BEYER WEAVER & THOMAS LLP P.O. BOX 778 BERKELEY, CA 94704-0778 | | | NGUYEN, LAM S | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2853 | |

DATE MAILED: 04/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/960,618

Applicant(s)

OTSUKI, KOICHI

Examiner

LAM S NGUYEN

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-13 and 19-40 is/are allowed.
- 6) ☒ Claim(s) 14-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 01/26/2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 14-16, 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Ohkoda (US 6457803).

Ohkoda discloses a dot-recording device (FIG. 14) for recording ink dots on a surface of a print medium (FIG. 14, element 127) with the aid of a dot-recording head (FIG. 14, element 124) provided with a plurality of dot-forming elements (FIGS. 15-16, element 125) for ejecting ink droplets, the dots recording device comprising:

a main scanning unit configured to drive the dot-recording head and/or the print medium to perform main scanning (FIG. 14, element CONTROL SECTION);

a head driver configured to drive at least some of the dot forming elements to form dots during the main scanning (FIGs. 15-16);

a platen (FIGs. 15-16, elements 121, 123, 122) configured to extend in the main scanning and to be disposed opposite the dot-forming elements at least along part of a main scan path direction (FIG. 14, element 121), and the platen being configured to support the print medium at a position opposite the dot-recording head (FIG. 14);

a sub-scanning unit (FIG. 15-16, element 139) configured to move the print

medium to perform sub-scanning in between the main scans; and

a controller configured to control the dot recording device, wherein the platen has a slot (FIG. 15-16: spaces between elements 121-123) extending in the main scanning direction a width of the slot in the sub-scanning direction corresponding to a specific sub-scanning range on a surface of the dot recording head including not entirely but part of the plurality of dot-forming elements (FIG. 15-16, element 125);

wherein the platen comprises:

a first support (FIG. 15, element 123) configured to support the print medium, the first support extending in the main scanning direction at a position opposite a first sub-group of dot-forming elements selected from the plurality of dot-forming elements;

a first slot for receiving the ink droplets (FIG. 15-16: elements 133 and 132) extending in the main scanning direction at a position opposite a second sub-group of dot-forming elements which are disposed in the sub-scanning direction downstream from the first sub-group of dot-forming elements;

a second support (FIG. 15, the middle element 121) configured to support the print medium, the second support extending in the main scanning direction at a position opposite a third sub-group of dot-forming elements which are disposed in the sub-scanning direction downstream from the second sub-group of dot-forming elements.

Referring to claim 15: a second slot (FIG. 15, slot 132) extending in the main scanning direction at a position opposite a fourth sub-group of dot-forming elements which are disposed in the sub-scanning direction downstream from the third sub-group of dot-forming elements.

Referring to claim 16: wherein the controller has:

a first image printing mode in which dots are formed on the printing medium with the aid of the second to fourth sub-groups of dot-forming elements without the use the first sub-group of dot forming elements, thereby printing images without blank spaces up to front and/or rear edges of the print medium (FIG. 15-16); and

a second image printing mode in which dots are formed on the print medium with the aid of the first to fourth sub-groups of dot-forming elements, thereby printing images with blank spaces along the front and rear edges of the print medium (FIG. 1).

Referring to claim 18: wherein the platen has:

an upstream slot (FIG. 16, element 133) that extends in the main scanning direction at a position opposite a dot-forming element disposed at an upstream edge of the dot-recording head in the sub-scanning direction

a downstream slot (FIG. 16: the last slot on the left of element 122) that extends in the main scanning direction at a position opposite a dot-forming element disposed at a downstream edge of the dot recording head in the sub-scanning direction.

the controller comprises a print data storage unit which stores print data partially composed of image data for recording images in an expanded area that extends lengthwise beyond at least the front and rear edges of the print medium (The corresponding memory stores the print data to be printed in FIG 15 and FIG 16); and an edge printing unit that ejects ink droplets onto the expanded area on the basis of the print data.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ohkoda (US 6457803) in view of Ono et al. (US6168320).

Ohkoda discloses the claimed invention as discussed above except wherein the controller has an upper-edge printing mode in which dots are formed in the upper-edge portion of the print medium with the aid of the fourth sub-group of dot-forming elements without the use of any of the first to third sub-groups of dot-forming elements; an intermediate printing mode in which dots are formed in the intermediate portion of the print medium with the aid of the second to fourth sub-groups of dot-forming elements without the use of the first sub-group of dot-forming elements; and a lower-edge printing mode in which dots are formed in the lower-edge portion of the print medium with the aid of the second sub-group of dot-forming elements without the use of the first, third, or fourth sub-group of dot-forming elements.

Ono et al. disclose a printing method having a first recording mode to effect printing near an edge of the printing medium (FIG. 5B: the printing mode for ONE-PASS PRINTING IMAGE REGION), in the first recording mode the controller performing upper-edge/lower-edge printing by ejecting ink droplets from at least some of the dot-forming elements near the edge of the printing medium (FIG. 5B: printing elements Cn, Bn ,An) and without ejecting ink droplets from dot-forming elements other than the dot-forming elements near the edge of the printing medium (FIG. 5B: printing elements Dn), and an second recording mode to effect printing an intermediate portion of the printing medium (FIG. 5B: the printing mode for MULTI-PASS PRINTING IMAGE REGION) and wherein a surface area of the print medium is divided into an

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upper-edge portion containing the front edge of the print medium, a lower-edge portion containing the rear edge of the print medium, and an intermediate portion disposed between the upper-edge portion and lower-edge portion (FIG. 5A-B).

Therefore, it would have been obvious for one having ordinary skill in the art at the time the invention was made to modify the controller in the printing apparatus disclosed by Ohkada such that the controller has the first recording mode to effect printing near an edge of the printing medium and the second recording mode to effect printing an intermediate portion of the printing medium as disclosed by Ono et al. The motivation of doing so is to broaden the effective printing region to be printed by a printing head and execute optimal printing corresponding to input image data as taught by Ono et al. (column 2, line 61-64).

Allowable Subject Matter

3. Claims 1-13 and 19-40 are allowed.

Referring to claims 1-2, 19-20, 33-34: In light of the applicants' arguments, the examiner admits that the cited references fail to disclose wherein the controller has a first recording mode performing edge printing by ejecting ink droplets from at least some of the dot-forming elements disposed opposite the slot and without ejecting ink droplets from dot-forming elements other than the dot-forming elements disposed opposite the slot. Therefore, the claimed invention is not disclosed by the cited prior art.

Claims 3-13, 21-32, and 35-40 are allowed because they depend directly/indirectly on claim 1, 2, 19, 20, 33, or 34.

Response to Arguments

Applicant's arguments filed 12/08/2003 have been fully considered but they are not persuasive.

Regarding to the arguments on page 20 referring to claims 14-15: The applicants argued that there is no slot for receiving the ink droplets in the Ohkoda printer. However, as discussed above, in FIG. 14-15, elements 132-133 are slots for receiving ink drops. Therefore, the argument is not persuasive.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LAM S NGUYEN whose telephone number is (571)272-2151. The examiner can normally be reached on 7:00AM - 3:30PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, STEPHEN D MEIER can be reached on (571)272-2149. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LN
April 9, 2004



HAI PHAM
PRIMARY EXAMINER